

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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In re Application of:

Motiwala et al.

Serial No.: 09/766,558

Filed: January 19, 2001

For: **METHOD AND APPARATUS FOR  
EFFICIENT USE OF COMMUNICATION  
RESOURCES IN A COMMUNICATION  
SYSTEM**

Examiner: Shuwang Liu

Group No.: 2634

Docket No. PA000103

SUPPLEMENTAL APPEAL BRIEF (37 C.F.R. §1.192)Mail Stop Appeal Briefs – Patents  
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Alexandria, VA 22313-1450

Sirs:

In response to the Office Action dated May 19, 2005 in which prosecution is reopened with new grounds of rejection. Pursuant to 37 C.F.R. § 193(b)(2), Appellants request reinstatement of the appeal. Appellants hereby submit Appellants' Supplemental Appeal Brief and petition for a three-month extension of time.

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**REAL PARTY IN INTEREST**

The corresponding subsection of the Appeal Brief filed on February 17, 2005 is incorporated herein by reference.

**RELATED APPEALS AND INTERFERENCES**

The corresponding subsection of the Appeal Brief filed on February 17, 2005 is incorporated herein by reference.

**STATUS OF CLAIMS**

The corresponding subsection of the Appeal Brief filed on February 17, 2005 is incorporated herein by reference.

In the Office Action dated May 19, 2005, the Examiner reopened prosecution by raising new grounds of rejection on claims 1-43.

Claims 1, 2, 4-6, 8-16, 19, 20, 22-27, 29-31, 33-40 and 43 rejected under 35 U.S.C. §102(b) as being anticipated by *Halter* (U.S. Patent Number 6,754,290).

Claims 3, 7, 17, 18, 21, 28, 32, 41 and 42 rejected under 35 U.S.C. §103(a) as being unpatentable over *Halter* (U.S. Patent Number 6,754,290) in view of *Kawable* (EP0998052).

**STATUS OF AMENDMENTS**

The corresponding subsection of the Appeal Brief filed on February 17, 2005 is incorporated herein by reference.

**SUMMARY OF CLAIMED SUBJECT MATTER**

The corresponding subsection of the Appeal Brief filed on February 17, 2005 is incorporated herein by reference.

**NEW GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

In the Office Action dated May 19, 2005, the Examiner reopened the prosecution with new grounds of rejection. Appellants respectfully request the Board of Patent Appeals and Interferences to review the following new grounds of rejection on appeal:

- 1) Claims 1, 2, 4-6, 8-16, 19, 20, 22-27, 29-31, 33-40 and 43 rejected under 35 U.S.C. §102(b) as being anticipated by *Halter* (U.S. Patent Number 6,754,290).

2) Claims 3, 7, 17, 18, 21, 28, 32, 41 and 42 rejected under 35 U.S.C. §103(a) as being unpatentable over *Halter* (U.S. Patent Number 6,754,290) in view of *Kawable* (EP0998052).

### **ARGUMENT**

Appellants respectfully submit that claims 1-43 are allowable over the prior art cited by the Examiner. Each of the issues presented for review is addressed below.

#### **35 U.S.C. § 102(b) Rejection**

#### **Claims 1, 2, 4-6, 8-16, 19, 20, 22-27, 29-31, 33-40 and 43**

Claims 1, 2, 4-6, 8-16, 19, 20, 22-27, 29-31, 33-40 and 43 stand rejected under 35 U.S.C. §102(b) as being anticipated by *Halter* (U.S. Patent Number 6,754,290).

In the new ground of rejection, the Examiner basically alleged that all limitations of the rejected claims are found in *Halter* with the exception of the demodulation aspect of the channel elements of Appellants' claims. The Examiner nevertheless cited a different reference, *Dent et al.* (U.S. Patent No. 6,625,236) and contended that it is inherent to use a MAP (Maximum A Posteriori) decoder to perform demodulation.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ.2d 1051, 1053 (Fed. Cir. 1987). Appellants are mindful that a different reference may be cited to show that a characteristic not disclosed in the reference to show inherency. MPEP § 2131.01.

If the Examiner relied on *Dent et al.* to show the inference of the demodulation aspect of *Halter*, the argument should fail for the reasons stated below.

However, prior to present Appellants' positions, few terms need to be explained. The terms are well known in the art and are provided herein for consistence and clear understanding in explanation. In modern communication practices, signals carrying information are mostly transmitted digitally. Information signals can be represented by bits, which are basic units of the digital signals. The speed of the digital signals traveling through a communication channel or

medium can be expressed in bits per second (bps). For reliable signal transmission, the raw information signals, without more, are seldom nakedly sent through the transmission channels on their own. Instead, the information signals are coded, i.e., mixed, with other bits which serve specific purposes such as error correction. For purpose of differentiation in terminology, the basic unit of the coded information signals is called a "symbol" instead of a "bit." Even after the signals are coded as symbols, the signals are still not ready to be sent out through the transmission channels. To maximize the signal carrying capacities of the channels, the symbols are often modulated with chips. For examples, depending on the data rate, a symbol may comprise 16 chips, 8 chips, 4 chips, and so forth. (e.g., see page 12, line 20 to page 13, line 2 of Appellant's specification). As such, more than one symbol stream can go through one transmission channel as long as each symbol stream is modulated by a differentiable or unique chip pattern. At the receiving end, through various techniques, such as the technique used in the receiver 20 as shown and described in FIG. 2 of Appellants' disclosure, the different symbol streams can be individually recovered by virtual of their unique chip patterns.

Removing the underlying chips to recover the original symbols is called demodulation, in a manner similar to removing the carrier frequency of a modulated waveform. The demodulation process is clearly described in Appellants' specification (e.g., see page 8, line 4 to page 10, line 15 of Appellants' specification).

In the rejection, the Examiner equated the MAP engine of *Halter* as the "channel element" as claimed by Appellants, and turned to *Dent et al.* to prove that "[i]t is inherent that the MAP decoder performs a demodulation," to make up for the lack of demodulation teaching in *Halter*.

Appellant respectfully submit that the Examiner quoted *Dent et al.* out of context and erroneously assumed MAP decoding as inherently associated with demodulation.

MAP is a statistically algorithm for estimating a posteriori event based on a priori information (e.g., see M. DeGroot, *Optimal Statistical Decisions*, McGraw Hill, 1970). The MAP methodology is used in many other fields and not only limited to signal processing in communications. When applied in the art of communications, using the MAP scheme for decoding symbols or bits is not the same as using the MAP scheme for decoding chips, much less using the MAP scheme for demodulating the modulated symbols into unmodulated

symbols. In essence, the Examiner contended that the latter is found in *Halter* by way of inherency shown in *Dent et al.*

Nowhere in *Halter* is there any mention of demodulation used in the MAP decoder. Quite the contrary, the MAP engine of *Halter* functions at the symbol or bit levels. For example, throughout *Halter*, the intermediate results called "symbol estimates" are stored in various buffers (e.g., see column 5, lines 48, 52, and 55, and column 7, line 22 and 30 of *Halter*). Furthermore, prior to the MAP operation, "symbols" are stored in buffers ready to be processed (e.g., see column 6, line 33 and 34 of *Halter*).

Inherency may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient. *In re Oelrich*, 666 F.2d 578, 581, 212 USPQ 323, 326 (CCPA 1981).

Here, Appellant respectfully submit that there is not even a trace of probabilities or possibilities of the MAP engine of *Halter* performing demodulation. The reason is under the circumstances, the MAP engine of *Halter* does not need demodulation.

Accordingly, the Examiner's rejection under 35 U.S.C. § 102(e) should be reversed.

Notwithstanding the unsustainable rejection as mentioned above, it needs to point out that the law is well settled that claims should be read in light of the specification. That is, claim terms are not read in a vacuum, but rather must be read in the context of the written description and the prosecution history. *V-Formation, Inc. v. Benetton Group SpA*, 401 F.3d 1307, 1310 (Fed. Cir. 2005). In constructing a rejection based on anticipation, the examiner must identify the elements of the claims of the application, determine their meaning in light of the specification and prosecution history, and identify the corresponding elements disclosed in the allegedly anticipating reference. *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984)

Appellants are mindful that during patent examination, each claim term in a claim is given its broadest reasonable construction consistent with the specification. *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ.2d 1664, 1667 (Fed. Cir. 2000). This means that the words of the

claim must be given their plain meaning unless applicant has provided a clear definition in the specification. *In re Zletz*, 893 F.2d 319, 321, 13 USPQ.2d 1320, 1322 (Fed. Cir. 1989)

Here, Appellants basically define the term "channel element" on page 2, lines 3-8 of the specification. Furthermore, an embodiment of the "channel element" is clearly described from page 8, line 4 to page 10, line 15 of the specification. Thus, the meaning of the "channel element" when read in light of the specification is for symbol demodulation and energy accumulation and not for symbol estimation via the MAP process of *Halter*. If that is not enough, in conjunction with the recitation of the "channel element," an additional phrase "to demodulate data symbols" follows, as recited in Appellants' independent claims 1, 12, 25 and 30. Appellants therefore submit that independent claims 1, 12, 25 and 30 are clearly distinguishable over *Halter*.

It also should be noted that claim 30 is recited in means-plus-function form in accordance with 35 U.S.C § 112, ¶ 6. In examining such a claim, structure disclosed in the specification may not be disregarded when rendering a patentability determination. MPEP § 2181. The structure described in Appellants' specification for the claimed invention is vastly different from that of *Halter* as mentioned above. Claim 30 is therefore submitted to be, *a fortiori*, patentable over *Halter*.

In light of the foregoing, it is respectfully submitted that independent claims 1, 12, 20, 25 and 39 are not anticipated by *Halter*. Claims 2, 4-6, 8-11, 13-16, 19, 22-24, 26, 27, 29-31, 33-38, 40 and 43 are dependent claims, with each of the dependent claim includes one or more limitations on the top of their respective independent claim, are submitted to be even more patentable over the prior art.

The Examiner's rejection on 1, 2, 4-6, 8-16, 19, 20, 22-27, 29-31, 33-40 and 43 under 35 U.S.C. § 102(b) should be reversed.

**Rejection under 35 U.S.C. §103(a) – Honkasalo in view of Kawabe**  
**Claims 3, 7, 17, 18, 21, 28, 32, 41 and 42**

In the new ground of rejection, claims 3, 7, 17, 18, 21, 28, 32, 41 and 42 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Halter* in view of *Kawabe* (EP0998052).

Appellants respectfully traverse the rejection.

35 U.S.C. § 103(c) states that:

Subject matter developed by another person, which qualifies as prior art only under one or more subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time of the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Pursuant to 35 U.S.C. § 103(c) and M.P.E.P. § 706.02(l)(1), the *Halter* reference is disqualified as prior art against Appellant's claimed invention because *Halter* and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person organization. More specifically, the *Halter* reference and the present application were, at the time the invention was made, all owned by Qualcomm Incorporated.

With the primary reference *Halter* disqualified, the rejection under 35 U.S.C. § 103(a) cannot be sustained and should be reversed.

**Conclusion**

Claims 1 - 43 are now pending in the application. Appellants respectfully submit that the pending claims are patentable over the prior art. Reversal of all rejections is respectfully requested.

In the event of any fees that may be due with this response, please charge or deposit the amount to Deposit Account No. 17-0026. The Commissioner is hereby further authorized to charge any additional fees which may be required, or credit any overpayment, to said Deposit Account No. 17-0026.

Respectfully submitted,

Date: November 21, 2005

By: \_\_\_\_\_

  
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**APPENDIX****CLAIMS**

The Appendix section of the Appeal Brief filed on February 17, 2005 is incorporated herein by reference.

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